Uniform Voting in Michigan: A report to the Legislature

Presented by
Secretary of State
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I. Executive Summary

In December 1995, Michigan Secretary of State Candice S. Miller appointed a Special Advisory Committee on Elections to conduct a comprehensive review of Michigan's elections system. The Advisory Committee's final report, issued in June 1997 and endorsed by Secretary Miller, recommended that the state fund the "establishment and implementation of a statewide voting system to reduce election costs, reduce ballot printing errors, facilitate voter instruction programs and eliminate the need for voters who move to become acquainted with different voting systems." While there was a critical need for action on the recommendation at the time it was released, the "equal protection" issues which have emerged in the aftermath of the 2000 presidential election (i.e., the fact that certain voting systems alert voters when they have spoiled their ballot and other systems do not) have greatly heightened the need for the replacement of the out-of-date voting equipment still in use in the state.

Carrying the Advisory Committee's work forward, this report details the proactive steps that Michigan needs to take now to avoid future challenges over the way elections are conducted in Michigan – challenges which would only work to erode public confidence in Michigan's elections system.

Summary of Recommendations

The report recommends that the state fund a statewide, uniform optical scan voting system that employs "precinct based" tabulation technology. The implementation of such a system would hold the following advantages:

- All voters would enjoy "equal protection" against ballot spoilage. As a result, "voter falloff" would be reduced throughout the state.

- The accommodation of voters who are elderly or disabled would be fully ensured.

- A cost savings could be realized on the purchase of voting equipment, service contracts and ballots.

- The education of voters – and future voters – on the procedures for casting a ballot would be facilitated as only one voting process would be involved. (At

the present time such programs are difficult to coordinate because of the multiplicity of voting systems in use.)

- The training of precinct inspectors (a county responsibility) would be greatly facilitated. As an added benefit, the skills and experience of seasoned precinct inspectors who move to a different jurisdiction within the state would not be lost.

- Election results could be compiled and released with greater speed and efficiency. Greater efficiency and accuracy would also gained at the certification step as it would no longer be necessary for the Boards of County Canvassers to review a variety of different Statement of Vote forms and Poll Book formats.

- The availability of uniformly compiled and presented precinct level vote data immediately after the election would aid candidates and political parties in identifying the precincts where vote recounts may be warranted.

- Michigan's city and township clerks would have an expanded opportunity to support one another through their association activities.

The report also offers three additional recommendations to strengthen Michigan's elections system:

- The development and implementation of an "early voting" program which would permit Michigan citizens to vote at convenient locations up to two weeks prior to an upcoming election. The program would be supported with state purchased direct recording electronic (DRE) voting equipment. DRE systems are ideally suited for "early voting" programs as such systems can be programmed with hundreds of different ballot forms – a feature which can be used to match any given voter to his or her precinct's ballot regardless of where the voting equipment is stationed. As an initial step, an "early voting" option could be offered through the clerks' offices. Later implementation steps could include the expansion of the program to afford voters the opportunity to vote at "remote sites" prior to the election.

- The expansion and improvement of the training programs currently conducted for election inspectors appointed to serve in the polls. The initiative could be supported with 1.) state grants to county and local election officials responsible for conducting election inspector training programs and 2.) state sponsored "train the trainer" programs designed to improve the quality of the instruction offered election inspectors.

- The development and implementation of a program which would require voters who claim to be registered but cannot be found on the registration rolls to vote

a "provisional ballot." Under the proposed program, any "provisional ballots" voted on election day would not be counted unless it was later confirmed that the voter did, in fact, register to vote before the registration deadline for the election at hand.

The Qualified Voter File system (QVF), now in full operation, has succeeded in keeping Michigan on the forefront of election reform. The integrity of Michigan's elections system has been further enhanced by the recent adoption of legislation requiring Michigan citizens to use the same residential address for both driver license and voter registration purposes. As a recognized leader in election reform, Michigan continues to serve as a model for other states to follow. Florida, South Dakota, Maryland and West Virginia are among the states that are presently exploring the development of similar statewide voter registration record management systems. At the same time, national election reform panels across the nation are studying Michigan's innovative use of voter registration data and driver license data to update both files.

With the QVF in place, Michigan is in an excellent position to take the next step forward and improve its elections system through the adoption of the five recommendations offered in this report. While Michigan is not in a "state of crisis," the adoption of the proposals will ensure that Michigan's national reputation as a leader in election reform is preserved.

Summary of Costs

The cost of a statewide, uniform optical scan voting system which employs "precinct based" tabulation technology is estimated to be $26.1 million to $38.7 million.

As 3,006 of Michigan's 5,376 precincts (55.9%) already employ optical scan voting technology, the cost of implementing a statewide, uniform optical scan voting system could be spread over a number of years. The first year would involve the purchase of optical scan voting equipment for those jurisdictions that do not currently employ optical scan voting technology to conduct elections (estimated cost: $14 million). In subsequent years, updated optical scan voting equipment would be purchased to replace the optical scan voting equipment now in use as the equipment currently being used to conduct elections becomes outdated. (The optical scan voting equipment replacements would take place in 2003 and 2005.) Such an approach would require an initial appropriation of $14 million with the remaining costs ($12.1 million to $24.7 million) spread over the following three fiscal years.

II. Introduction

Structure of Michigan's Elections System

Of the eight states that administer elections on the local level, Michigan is the largest state both in terms of its population and geography to do so. Involving 83 county clerks, 272 city clerks, 1,242 township clerks, 261 village clerks and 580 school election coordinators (school board secretaries), Michigan's elections system is administered by 2,438 county and local election officials making it the most decentralized elections system in the nation. (State and federal elections are administered by Michigan's county clerks, city clerks and township clerks. See "Appendix: Public Officials, Commissions and Boards Involved in the Administration of Elections in Michigan" for further detail.)

A New Era in Election Reform

While Michigan's highly decentralized elections system was essentially designed to serve the needs of an earlier age when the state's population was smaller and less mobile, two significant election reform measures put in place during the last 25 years have kept the system in pace with Michigan's population growth and changing population mobility patterns.

The first reform measure came in 1975 with the introduction of the Secretary of State's Branch Office Voter Registration Program – the first "motor/voter" program established anywhere in the United States and the precursor to the motor/voter program mandated under the National Voter Registration Act of 1993. Nationally recognized for its performance and success, the program afforded Michigan electors the opportunity to apply for and update voter registrations in Secretary of State branch offices, a revolutionary concept at the time. Prior to the introduction of the program, many qualified electors had a difficult time determining where they should go to register to vote. Far worse, it was not unusual for a voter who had moved from one jurisdiction in the state to another jurisdiction in the state to fail to recognize that it was necessary to reregister to vote in his or her new city, township or village of residence.

With the introduction of the program, a voter could apply to register to vote in any Secretary of State Branch Office in the state with the assurance that his or her

registration application would be forwarded to the proper jurisdiction in a matter of days. In addition, as Michigan citizens were accustomed to visiting a Secretary of State Branch Office after moving to update the address appearing on their driver license, the number of voters who failed to submit a voter registration address change after moving was greatly minimized.

Just as rapidly changing demographics prompted the development and implementation of the Branch Office Voter Registration Program, new pressures and demands placed on the state's voter registration system during the ensuing years created a critical need for a similarly innovative response. These pressures were exerted by public officials interested in enhancing the security and integrity of the system, advocacy groups promoting greater system flexibility and service, and political organizations searching for greater convenience in accessing data maintained on file under the system. While these pressures were compelling in and of themselves, the passage of federal voter registration reform legislation (the National Voter Registration Act of 1993) greatly heightened the urgency of the needed response as Michigan's cities and townships were required to absorb increased voter registration file maintenance costs, cope with cumbersome voter registration file maintenance procedures and confront a sharp increase in unnecessary voter registration transactions due to overlapping voter registration programs.

To address these various needs, the Michigan State Legislature initiated a second wave of voter registration reform through the enactment of PA 441 of 1994 - legislation which required the Secretary of State to establish and maintain a statewide Qualified Voter File (QVF) system. Placed in operation in 1998, the QVF is a distributed database which ties Michigan's city and township clerks to a fully automated, interactive statewide voter registration file to achieve a wide variety of significant advantages including the elimination of all duplicate voter registration records in the system; the streamlining of the state's voter registration cancellation process; the elimination of registration forwarding errors; and the elimination of duplicative voter registration processing tasks.

With the implementation of the QVF, each and every motor/voter registration transaction executed in a Secretary of State branch office is electronically forwarded to the appropriate local election official; a paper copy of the transaction follows within days to confirm the electronic notification and supply the election official with the voter's signature.

Under a later amendment to the Michigan Vehicle Code (PA 118 of 1999), all drivers are required to use their registration address for driver license purposes. With this requirement, all voter registration address changes are automatically posted to the driver file. The Department supplies all voters who submit a new voter registration address an address change sticker for their driver license.

Michigan is the *first* state to use voter registration address change data filed with local election officials to update driver license records.

While Michigan entered the new millennium "ahead of the curve" with respect to the accuracy, convenience and efficiency of its voter registration system, the November 7, 2000 presidential election brought Michigan - along with the majority of the other states in the country - face-to-face with a new era in election reform by drawing national attention to the *mechanics* of the election process. In the U.S. Supreme Court's majority opinion in *Bush vs. Gore,* Chief Justice William Rehnquist observed, "… it is likely legislative bodies nationwide will examine ways to improve the mechanisms and machinery for voting." It is conceivable that by the end of this investigative process, the manner in which the nation conducts public elections will be transformed in ways that have not yet been imagined. It is also entirely possible that Michigan, with its extremely decentralized elections system, faces a greater hurdle in addressing this challenge than any other state in the nation.

The Michigan Challenge

From the mid-1800's until the early 1970's when punch card voting was first introduced in Michigan, paper ballots and voting machines were exclusively used to conduct elections in the state. (Voting machines were approved for use in Michigan in 1893.) After punch card voting was introduced, no new voting systems were marketed in the state until 1991 when the Board of State Canvassers approved the state's first "optical scan" voting apparatus. Since 1991, seven *additional* systems have been approved for use in the state. (The various types of voting systems employed to conduct elections in Michigan are discussed in detail in the next section of this report, "Balloting Methods.")

By the mid-1990's, the unprecedented acceleration in the development and introduction of new voting systems in the state had created a series of issues that required a legislative response. Most critically, the provisions of Michigan election law which governed the evaluation and approval of new voting systems needed updating to assure the comprehensive and meaningful evaluation of the technology built into the systems. In answer, PA 583 of 1996, an amendment to Michigan election law, was enacted to:

- Stipulate that all new voting systems used in Michigan must be approved by an independent testing authority (ITA) to ensure the system's conformance with all federal voting system standards.

- Require vendors seeking approval of *a new voting system* to file a $1,500.00 application fee. Require vendors seeking approval of *a voting system upgrade* to file a $500.00 application fee.

- Require voting system vendors to submit on an ongoing basis: 1.) information on other states using the system 2.) performance evaluations produced by any state or local governmental unit 3.) copies of all standard contracts and maintenance agreements and 4.) all changes made in standard contracts and maintenance agreements.

- Direct the Board of State Canvassers to field test under "simulated election day conditions" all new voting equipment as a part of the certification process. Require the vendor to pay for the cost of the testing.

- Require all governmental units to notify the Secretary of State within 30 days before purchasing a new voting system. Require the Secretary of State to forward to any governmental unit providing such notification all information concerning the operation of the voting system in Michigan or any other state.

- Grant the Board of State Canvassers the authority to "decertify" voting systems.

While the measures adopted under PA 583 of 1996 succeeded in updating the procedures employed in Michigan to evaluate and approve newly developed voting equipment (see "Appendix: Voting System Approval Procedures"), two emerging issues remained unaddressed:

Proliferation of different voting systems within counties: Prior to 1991, Michigan voters who attended the polls used paper ballots, voting machines or punch card ballots to cast their votes. With only three balloting methods in operation in the state, the number of counties that employed more than two balloting methods to conduct elections was limited to 20. By 2000, the approval and introduction of new voting systems in the state had increased the number of counties that employ more than two balloting methods to conduct elections to 29 with six of those counties employing *four balloting methods* and one of the counties (Wayne County) employing *five balloting methods*. The proliferation of different voting systems within counties negatively impacts the state's elections system in a number of significant ways:

- The more balloting methods in operation in a county, the greater the administrative burden and cost at the county level as the county clerks are responsible for training the election workers appointed to serve throughout the county and the County Election Commissions are responsible for producing the ballots needed to conduct state and federal elections. In addition, the Boards of

County Canvassers, responsible for certifying elections in the county, must review a variety of different Statement of Vote forms and Poll Book formats.

- The skills and experience of seasoned precinct inspectors who move within the state are lost in instances where the voting equipment employed to conduct elections in their former jurisdiction of residence and the voting equipment employed to conduct elections in their new jurisdiction of residence is different.

- Voters are placed at a disadvantage as there is an increased likelihood than an elector who moves will be confronted with an unfamiliar voting procedure the next time he/she attends the polls. At the same time, the coordination of voter education programs becomes increasingly difficult due to the multiplicity of voting systems in use.

- The ability of Michigan's county, city and township clerks to share information and offer peer support is diminished.

Outmoded voting equipment: While many cities and townships in the state have been quick to embrace the new voting equipment technology which has been made available in Michigan over the last ten years, a sizable number of jurisdictions continue to employ outdated and outmoded equipment to administer elections. As recently as the November 7, 2000 general election, lever style voting machines were used in 693 of Michigan's 5,376 precincts (13%); paper ballots were used in 137 precincts (3%); and "central count" punch card systems were used in 1,078 precincts (20%). The resulting "technology gap" has created significant disparities in the measures implemented at the precinct level to protect voters from spoiling their ballots and losing votes.

This same dynamic contributed to the problems Florida experienced in administering the 2000 presidential election as the local units were last in line for election reform support. Without state assistance, many of the state's local jurisdictions were not prepared to fund needed upgrades in their voting technology.

The issues outlined above have not gone unnoticed in the past. In December 1995, Michigan Secretary of State Candice S. Miller appointed a Special Advisory Committee on Elections to conduct a comprehensive review of Michigan's elections system. The Advisory Committee's final report, issued in June 1997 and endorsed by Secretary Miller, recommended that the state fund the "establishment and implementation of a statewide voting system to reduce election costs, reduce ballot printing errors, facilitate voter instruction programs and eliminate the need for voters who move to become acquainted with different voting systems." The

Advisory Committee offered the following observations with respect to the recommendation:

> *"The purchase of voting systems on the local level has resulted in as many as five systems to be active within a county at one time. The result is an excess in the cost of elections, training on all five systems, voter confusion when moving within a county and various other problems. In addition, voter education on the voting process via the broadcast media is rendered impractical leaving the impression that the operation of the voting equipment is highly complex. This is clearly a disservice to the voters and doubtlessly contributes to lower voter participation rates."*

The observations and conclusions offered by the Advisory Committee were sound when issued and remain so today. In view of the current national focus on the "mechanics and machinery for voting," it is appropriate that we seize this opportunity to carry the Advisory Committee's work forward. This report is dedicated to accomplishing this end and, as a further step, provides specific recommendations on the type of uniform voting system that would best serve Michigan's needs and interests.

III. Balloting Methods Currently Employed in Michigan

There are five different types of balloting methods employed throughout the United States to administer elections: 1.) optical scan voting systems 2.) direct recording electronic (DRE) voting systems 3.) punch card voting systems 4.) mechanical lever voting machines and 5.) paper ballots. Michigan employs all five types of balloting methods to administer elections. Within the optical scan, DRE and punch card balloting method categories there is a certain degree of variety as the equipment involved is marketed and sold under different brand names by private sector interests. (Mechanical lever voting machines were similarly produced and sold by a number of different manufacturers throughout the years.) The following provides an overview of the five balloting methods:

Optical Scan Voting Systems

Usage in Michigan: Optical scan voting systems are employed in 3,006 of Michigan's 5,376 precincts (55.9%).

General description: Voter indicates choices on a paper form by marking designated "target areas" with a pen or pencil. Depending on the manufacturer of the equipment, this either requires that the voter color in an oval or connect the head and tail of an arrow with a line. Ballots are issued with a "secrecy sleeve" to protect the secrecy of the ballot after the voter completes the voting process and leaves the voting station.

How ballots are counted: If the jurisdiction employs "precinct based" tabulation technology, the voter removes the ballot from the secrecy sleeve and feeds it into a tabulator placed in the polls. "Read heads" engineered in the tabulator optically scan the votes cast on the ballot and electronically record them in a memory component housed in the tabulator. After passing over the read heads, the paper ballot is channeled into a storage bin where it remains until the close of the polls. After the close of the polls, the election workers responsible for managing the precinct use the tabulator to generate a report which lists the voting results. The ballots are secured by the election workers and transported to the clerk's office for safekeeping.

If the jurisdiction employs "central count" tabulation technology, the voter deposits his or her ballot in a ballot container placed in the polls. After the polls close, the ballots are transported to a central "counting center" where they are fed into a tabulator and optically scanned as explained above. After the completion of the tabulation process, the election workers responsible for managing the counting center use the tabulator to generate a report which lists the voting results. The ballots are secured by the election workers and transported to the clerk's office for safekeeping.

Absentee voting: Absentee voters are issued an optical scan ballot which corresponds in all respects to the optical scan ballots issued in the polls. Secrecy sleeves are issued with optical scan absentee ballots to protect the secrecy of the ballots.

Write-in votes: An appropriate number of blank lines and "target areas" are provided under each office for the entry of write-in votes. A voter who wishes to cast a write-in vote must write the candidate's name under the appropriate office and mark the corresponding "target area." Optical scan ballots which contain write-in votes must be visually inspected to determine if the write-in vote is valid; if valid, the write-in vote is documented in the precinct's poll book.

Spoiled ballots: A voter can "overvote" an office appearing on an optical scan ballot by casting more votes for the office than there are candidates to be nominated or elected to the office. A voter participating in a partisan primary can invalidate the partisan section of his or her primary ballot by casting votes in more than a single party column.

If the jurisdiction employs "precinct based" tabulation technology, the tabulator can be programmed to reject ballots which contain an "overvote" and partisan primary ballots which contain votes in more than a single party column. In such instances, the voter is extended the opportunity to obtain and vote a replacement ballot. If the voter does not accept the opportunity to vote a replacement ballot, the ballot is tabulated as voted; any invalid votes appearing on the ballot are *not* counted.

If the jurisdiction employs "central count" tabulation technology, the ballots are counted at an offsite location and consequently, there is no mechanism in the polls to identify ballots which contain an "overvote" or partisan primary ballots which contain votes in more than a single party column. In such jurisdictions, all ballots are tabulated as voted; any invalid votes appearing on the ballots are *not* counted.

Accessibility: At least one voting station which permits voting from a seated position is provided in optical scan precincts for voters in need of such accommodations.

Recounts: Optical scan ballots are recounted by hand or through the retabulation of the ballots at the discretion of the canvassing board responsible for the administration of the recount.

System advantages: Optical scan voting systems afford the following advantages:

- Ballots cast by absentee voters correspond in all ways to the ballots issued to voters in the polls.

- Offices and candidate names appear on the ballot; eliminates need for absentee voters to cross reference the ballot to a separate listing of offices and candidate names.

- If "precinct based" tabulation technology is employed by the jurisdiction, spoiled ballots can be identified before they are cast greatly minimizing "overvotes" and "cross-over" voting in partisan primaries.

- Voters who have special needs due to age or disability can be fully accommodated.

- As an optical scan voting station is extremely simple in design (secrecy screen and writing surface), additional stations can be erected with little or no notice to accommodate unanticipated voter traffic in the polls.

System disadvantages: Optical scan voting systems hold the following disadvantages:

- Ballots are costly to print due to the weight of the paper and the exacting production standards involved.

- If "central count" tabulation technology is employed by the jurisdiction, there is no mechanism in the polls to protect voters from "spoiling" their ballot.

- Ballots are inconvenient to transport and store due to their size and bulk.

- Write-in votes can cause false "overvotes" in instances where a voter has cast an invalid write-in vote in combination with a valid vote for an office. In such instances, the duplication of the ballot or the manual correction of the results tape is necessary.

- Write-in "stickers" can jam the tabulator.

- Pre-election testing procedures are burdensome to administer.

- Tabulators must be carefully stored between elections to avoid equipment damage.

- Recounts can result in vote changes due to the reinterpretation of ballot markings. The hand recount of optical scan ballots is slow, tedious and labor intensive.

Direct Recording Electronic Systems (DREs)

Usage in Michigan: DRE voting systems are employed in 97 of Michigan's 5,376 precincts (1.8%).

General description: Voter indicates choices by interacting with an electronically controlled unit placed in the voting station; a physical ballot is not involved. Depending on the manufacturer of the equipment, this either requires that the voter touch a terminal screen or press buttons on the equipment.

How ballots are counted: After the voter indicates that he or she has completed the voting process, the votes cast by the voter are stored in the unit's memory component. After the close of the polls, the election workers responsible for managing the precinct use the system to generate a report which lists the voting results.

Absentee voting: As a physical ballot which can be distributed by mail is required to accommodate absentee voters, jurisdictions which employ DRE equipment to conduct elections issue optical scan, punch card or paper absent voter ballots. Generally, jurisdictions that employ DRE equipment issue optical scan ballots to absentee voters. "Companion" absentee voting systems which rely on optical scan technology are sold with DRE voting systems.

Write-in votes: DRE systems are programmed to permit a voter who wishes to cast a write-in vote to spell the candidate's name on the unit. The write-in votes appear on the report generated to document the vote results.

Spoiled ballots: DRE systems are programmed to block voters from casting spoiled ballots; voters using such equipment are alerted if they attempt to cast more votes for an office than there are candidates to be nominated or elected to the office or attempt to cast votes in more than a single party column appearing on a partisan primary ballot.

Accessibility: At least one voting station which permits voting from a seated position is provided in DRE precincts for voters in need of such accommodations.

Recounts: DRE voting systems offer two alternatives for administering vote recounts: 1.) the data held in the system's memory component can be employed to regenerate a second set of vote totals for the office involved or 2.) a report which shows the votes cast by each participating voter can be generated for auditing purposes. If the second recount option is used, the data is randomly ordered to protect the secrecy of the ballot.

System advantages: DRE voting systems afford the following advantages:

- As a physical ballot is not involved, there are no ballot markings to interpret.
- Spoiled ballots are eliminated.
- The need to purchase ballots for voters attending the polls is eliminated. (Ballots must, on the other hand, be purchased for absentee voters.)
- Due to the accuracy of the systems and the manner in which the vote data is stored, vote recounts always produce the same results.
- Voters who have special needs due to age or disability can be fully accommodated.

System disadvantages: DRE voting systems hold the following disadvantages:

- Systems are costly to purchase and maintain as an electronic voting device is needed for each voting station (one station for every 200 registered voters).
- While voter participation rates can vary to a wide degree, the purchase of the equipment must be based on turnout anticipated for the next upcoming presidential election when the highest voter participation rates will occur. As presidential elections are conducted every four years, populous jurisdictions are compelled to purchase units which will receive very little usage.
- A different voting method must be employed for absentee voters.
- Pre-election testing procedures are burdensome to administer.
- Systems must be carefully stored between elections to avoid equipment damage.

Punch Card Voting Systems

Usage in Michigan: Punch card voting systems are employed in 1,443 of Michigan's 5,376 precincts (26.8%).

General description: Voter inserts a computer punch card designed with columns of small, numbered, perforated rectangles ("chads") in a "paging device" which lists the candidates' names. After seating the ballot in the paging device, the voter indicates choices by punching holes in the card with a punching tool. Ballots are issued with a "secrecy envelope" to protect the secrecy of the ballot after the voter completes the voting process and leaves the voting station.

How ballots are counted: If the jurisdiction employs "precinct based" tabulation technology, the voter removes the ballot from the secrecy envelope and feeds it into a tabulator placed in the polls. "Read heads" engineered in the tabulator identify the votes cast on the ballot and electronically record them in a memory component housed in the tabulator. After passing over the read heads, the ballot is channeled into a storage bin where it remains until the close of the polls. After the close of the polls, the election workers responsible for managing the precinct use the tabulator to generate a report which lists the voting results. The ballots are secured by the election workers and transported to the clerk's office for safekeeping.

If the jurisdiction employs "central count" tabulation technology, the voter deposits his or her ballot in a ballot container placed in the polls. (Ballot remains in the secrecy envelope.) After the polls close, the ballots are transported to a central "counting center" where they are fed into a tabulator and scanned as outlined above. After the completion of the tabulation process, the election workers responsible for managing the counting center use the tabulator to generate a report which lists the voting results. The ballots are secured by the election workers and transported to the clerk's office for safekeeping.

Absentee voting: Absentee voters are issued a computer punch card which corresponds in all respects to the computer punch cards issued in the polls, a secrecy envelope and a booklet which lists the candidates' names. To vote the ballot, the absentee voter cross references the numbers assigned to the candidates in the booklet ("punch positions") to the numbers appearing on the computer punch card and punches out the appropriate chads.

Write-in votes: Depending on the manufacturer of the system, write-in votes are cast by writing the candidate's name and the office involved on the secrecy envelope issued with the ballot (procedure used in jurisdictions which employ "central count" tabulation technology) or on a fold-over ballot attachment (procedure used in jurisdictions which employ "precinct based" tabulation

technology). If write-in is cast for a candidate seeking nomination to a partisan office, the candidate's political party affiliation must also be listed with the candidate's name and office. Punch card ballots which contain write-in votes must be visually inspected to determine if the write-in vote is valid; if valid, the write-in vote is documented in the precinct's poll book.

Spoiled ballots: A voter can "overvote" an office appearing on a punch card ballot by casting more votes for the office than there are candidates to be nominated or elected to the office. A voter participating in a partisan primary can invalidate the partisan section of his or her primary ballot by casting votes in more than a single party column.

Accessibility: At least one voting station which permits voting from a seated position is provided in punch card precincts for voters in need of such accommodations.

Recounts: Punch card ballots are recounted by hand or through the retabulation of the ballots at the discretion of the canvassing board responsible for the administration of the recount.

System advantages: Punch card voting systems afford the following advantages:

- Relatively inexpensive to purchase and maintain.
- Equipment is portable and lightweight; voting stations fold down to an easy-to-carry size.
- Voted ballots can be stored in a minimal amount of space.
- If "precinct based" tabulation technology is employed by the jurisdiction, spoiled ballots can be identified before they are cast greatly minimizing "overvotes" and "cross-over" voting in partisan primaries.
- Voters who have special needs due to age or disability can be fully accommodated.
- If "central count" tabulation technology is employed by the jurisdiction, the use of write-in "stickers" poses no difficulties.

System disadvantages: Punch card voting systems hold the following disadvantages:

- Absentee voters must cross reference the ballot to a separate listing of offices, candidate names and "punch positions." Locating and punching the

appropriate chads can be difficult for absentee voters – especially those who are elderly, sight impaired or disabled.

- If "central count" tabulation technology is employed by the jurisdiction, there is no mechanism in the polls to protect voters from "spoiling" their ballot.

- "Overvotes" or "cross-over" votes cast on partisan primary ballots which involve a combination of write-in votes and votes cast on the punch card involve special handling. In such instances, the voter's ballot must be repunched with the invalid votes eliminated – a labor intensive step which requires careful training.

- Pre-election testing procedures are burdensome to administer.

- Tabulators must be carefully stored between elections to avoid equipment damage.

- Recounts can result in vote changes due to "hanging chads." The hand recount of punch card ballots is slow, tedious and labor intensive.

- Worn or poorly maintained voting equipment can affect the accuracy of the election results.

- If "precinct based" tabulation technology is employed by the jurisdiction, write-in "stickers" can jam the tabulator.

Mechanical Lever Voting Machines

Usage in Michigan: Mechanical lever voting machines are employed in 693 of Michigan's 5,376 precincts (12.9%).

General description: The voter is escorted to a voting machine by an election worker. After the voter enters the voting compartment, the election worker operates the voting machine's entrance latch which closes a curtain to shield the voting compartment. The voter indicates his or her choices by turning down the pointers which correspond to the selected candidates. After completing the voting process, the voter operates a release lever which records his or her votes, resets the machine and opens the curtain.

How ballots are counted: The votes cast by each voter increment mechanically controlled tumblers which are concealed in a sealed compartment. After the polls close, the election workers open the sealed compartment and record the vote totals

shown on the tumblers. After recording the vote results, the machine is resealed to prevent tampering.

Absentee voting: As a physical ballot which can be distributed by mail is required to accommodate absentee voters, jurisdictions which employ voting machines to conduct elections issue optical scan, punch card or paper absent voter ballots. Generally, jurisdictions that employ voting machines issue paper ballots to absentee voters.

Write-in votes: Covered write-in "slots" are provided over or adjacent to each office for the entry of write-in votes. Prior to the opening of the polls, a paper "write-in roll" is installed behind the write-in slot covers. A voter who wishes to cast a write-in vote must lift the appropriate write-in slot cover and write the candidate's name on the exposed paper. After the polls close, the paper write-in roll is visually inspected to determine if any valid write-in votes were cast. Any valid write-in votes which are found are documented in the precinct's poll book.

Spoiled ballots: Voting machines are "set" by the machine custodian to block voters from casting spoiled ballots; if a voter using such equipment attempts to cast more votes for an office than there are candidates to be nominated or elected to the office or attempts to cast votes in more than a single party column appearing on a partisan primary ballot, he or she will find the voting pointers "locked" into the non-voting position.

Accessibility: At least one voting station which permits voting from a seated position is provided in voting machine precincts in need of such accommodations. Optical scan, punch card or paper ballots are supplied in the precinct for voters who indicate a need to vote from a seated position.

Recounts: If a vote recount is requested, the compartments which conceal the vote totals are reopened to confirm the accuracy of the documented vote totals.

System advantages: Voting machines afford the following advantages:

- Extremely durable in design and construction.
- Spoiled ballots are eliminated.
- Ballot printing expenses minimized as machine "strips" which list candidates' names are relatively inexpensive to produce.
- As a physical ballot is not involved, there are no ballot markings to interpret.

System disadvantages: Voting machines hold the following disadvantages:

- Machines are cumbersome to move and costly to store due to their weight and size.
- A different voting method must be employed for absentee voters and voters who need special accommodations in the polls.
- Replacement parts may be difficult or impossible to find.
- If a machine malfunctions and fails to record votes, the votes are irretrievably lost as there is no backup paper trail.
- Procedure for casting write-in votes is inconvenient and potentially confusing.
- Write-in "stickers" can jam the write-in paper roll.
- Ballot layout encourages "voter falloff," i.e., inadvertently or intentionally failing to cast votes for offices which appear on bottom of ballot.
- Voters sometimes confuse "lockout" function employed to protect against spoiled ballots as an equipment malfunction.
- Unless machines are immediately picked up and returned to storage after the election, recounts involve travel from precinct to precinct to open machines and view results.

Paper Ballots

Usage in Michigan: Paper ballots are employed in 137 of Michigan's 5,376 precincts (2.6%).

General description: Voter indicates choices by marking the ballot with "X" marks or checkmarks in the appropriate voting squares or circles. After completing the voting process, the voter folds the ballot to conceal his or her votes. After leaving the voting station, the voter presents the ballot to an election worker who deposits it in a ballot container.

How ballots are counted: After the polls close, the election workers remove the ballots from the ballot container and tally the valid votes cast on the ballots by hand.

Absentee voting: Absentee voters are issued a paper ballot which corresponds in all respects to the paper ballots issued in the polls.

Write-in votes: An appropriate number of blank lines and voting squares are provided under each office for the entry of write-in votes. A voter who wishes to cast a write-in vote must write the candidate's name under the appropriate office and mark the corresponding voting square with an "X" or a checkmark. Valid write-in votes observed by the election workers during the vote tally process are documented in the precinct's poll book.

Spoiled ballots: A voter can "overvote" an office appearing on a paper ballot by casting more votes for the office than there are candidates to be nominated or elected to the office. A voter participating in a partisan primary can invalidate the partisan section of his or her primary ballot by casting votes in more than a single party column.

Accessibility: At least one voting station which permits voting from a seated position is provided in paper precincts for voters in need of such accommodations.

Recounts: Paper ballots are recounted by hand.

Advantages: The use of paper ballots affords the following advantages:

- Ballots are inexpensive to print and can be produced by any printer.
- Ballots are easy to comprehend and use.
- Ballots cast by absentee voters correspond in all ways to the ballots issued to voters in the polls.
- Offices and candidate names appear on the ballot; eliminates need for absentee voters to cross reference ballot to a separate listing of offices and candidate names.
- Voters who have special needs due to age or disability can be fully accommodated.
- As a paper ballot voting station is extremely simple in design (secrecy screen and writing surface), additional stations can be erected with little or no notice to accommodate unanticipated voter traffic in the polls.
- Storage of voting equipment between elections (ballot containers and voting stations) requires a minimal amount of space.
- The use of write-in "stickers" poses no difficulties.

Disadvantages: The use of paper ballots holds the following disadvantages:

- There is no mechanism in the polls to protect voters from "spoiling" their ballot.
- The vote tally process is slow, tedious and labor intensive.
- Ballots are inconvenient to transport and store due to their size and bulk.
- Irregular ballot markings must be interpreted.

IV. Uniform Voting System Considerations

This section of the report reviews the principle developments, forces and ideas which are influencing current thinking in election reform. Any decisions made with respect to the implementation of a uniform voting system in Michigan must be finalized only after careful consideration has been given to the factors outlined below.

Internet Voting

With the explosive growth of the Internet for communication and commerce, a variety of academic and government sponsored studies have been conducted to explore the feasibility of using the Internet for voting. While there is no clear agreement on how or when the Internet should be employed to support public elections, there is a general consensus that further research and inquiry into the Internet's potential as a voting mechanism is warranted. Three general "categories" of Internet voting are generally discussed:

Voting in Internet-linked polling places: A system which would permit electors to vote via the Internet in traditional polling places. It has been speculated that such a program could be expanded to afford voters the opportunity to vote in any polling place in their jurisdiction of residence or county of residence. As a final implementation phase, the program could be developed to permit voters to cast their ballot in any polling place established anywhere in the state. It is probable that some form of polling place Internet voting will be implemented on a limited scale somewhere in the country within the next several election cycles.

Voting via Internet-linked kiosks: A system which would permit electors to vote via the Internet at convenient locations outside of traditional polling places such as shopping malls, libraries and other public places. If experiments with polling place Internet voting are successful, the next logical step would be the implementation of some form of kiosk-based Internet voting system. Before such a program could be introduced, significant issues surrounding the authentication of voters must be addressed.

Voting via the Internet from any remote site: A system which would permit electors to vote via the Internet from home, at work or virtually any other remote

site. The implementation of "remote site" Internet voting remains in the distant future given the myriad technical and social science issues which must be addressed prior to the introduction of such a program.

A March 2001 report on Internet voting released by the National Science Foundation, *Report of the National Workshop on Internet Voting: Issues and Research Agenda,* reached the following conclusion:

> *"… As the technological and social science issues were debated over the course of the workshop, it became apparent to all that ensuring the integrity of elections while preserving public confidence in the election process becomes increasingly complex when voting is moved to the Internet. Basically, it's a lot harder than it looks at first.*
>
> *"Many of the challenges to Internet voting do not lend themselves to easy solutions and this is especially true for voting from remote locations like your home or office. These challenges must be resolved prior to wholesale changes to the nation's election processes. The knowledge base for addressing the shortcomings of election systems is not large and hence there is an urgent need for focused research in the near and longer terms."*

In developing a recommendation for moving Michigan to a uniform method of voting, Internet voting was not given serious consideration due to the critical issues that must be addressed before any form of Internet voting can be implemented. Despite the fact that the conduct of elections via the Internet is not a current option, there is nevertheless little doubt that the obstacles which must be removed before Internet voting can be introduced will be fully addressed at some point in the future.

<u>CONCLUSION</u>: As Michigan is not in a position to wait for Internet voting to become a viable option before addressing the state's pressing voting equipment needs, the voting system selected for Michigan's uniform voting system should be viewed as an "interim step" while awaiting the availability of viable Internet voting options.

Voting System Migration Trends

At the present time, Michigan's cities and townships are rapidly migrating away from mechanical voting machines, paper ballots and punch card voting systems that employ "central count" tabulation technology and are moving toward optical

scan voting systems that employ "precinct based" tabulation technology. Jurisdictions of all sizes are participating in the migration from Michigan's largest cities (e.g., City of Detroit, Wayne County: 632,567 registered voters) to Michigan's smallest townships (e.g., Warner Township, Antrim County: 200 registered voters). Just since the 1998 election cycle, cities and townships containing *over one million Michigan voters* have replaced their voting machines, paper ballots and punch card voting systems with updated optical scan voting technology. In a story published by Gongwer News Service, Inc. in advance of the November 7, 2000 general election, the following observations were offered:

> *"In the 1998 election, more than 3.7 million voters of the nearly 6.8 million registered voters lived in areas that used voting technology that was at least 20 years old, such as computer punch cards, mechanical voting machines and paper ballots.*
>
> *"According to information gathered in [January 2000], the number of registered voters living in areas using older voting equipment fell by more than 1 million, to nearly 2.7 million.*
>
> *"Conversely, the number of voters living in districts using more modern equipment jumped by 1 million in those two years to nearly 4 million.*
>
> *"For 2000, the state shows slightly more than 100,000 fewer registered voters than in 1998 - partially because duplications have been cleared off the voter rolls with the statewide qualified voter file - voting in 5,376 precincts across the state.*
>
> *"The two largest new voting systems used by local governments in the state are the Accu-Vote and Optech systems. Optech is the largest of the two, used by localities that contain 2,115 precincts with nearly 2.7 million voters. Among those localities is Detroit.*
>
> *"Accu-Vote is used by localities containing 869 precincts with nearly 1.2 million voters.*
>
> *"Both systems use a form of optical character reading where a voter fills out a ballot which is then read by a counter at the precinct. There are other high-tech systems such as the Unilect system that involves a voter touching a screen.*
>
> *"Both Optech and Accu-Vote have seen a large increase in the number of localities going to the systems. In 1998, Optech and Accu-Vote were in governments that had 2 million and 862,000*

voters respectively. More than 800,000 of the 1 million voters in districts using high-tech systems live in areas that purchased one of those two systems.

"In contrast, punch card voting, introduced in the early 1970s, lost nearly 750,000 voters from the 1998 election cycle to this year, from more than 2.5 million voters to 1.8 million voters.

"Districts using some form of mechanical voting machines fell by some 200,000 voters, from more than 1 million to more than 800,000."

<u>CONCLUSION</u>: As Michigan is already in the process of moving toward optical scan voting systems, it will cost far less to adopt a statewide, uniform optical scan voting system than a statewide, uniform direct recording electronic (DRE) voting system.

Vote Loss Factors

As Florida election officials recounted the votes cast for the office of U.S. President at the November 7, 2000 general election, countless reports of "lost votes" poured from the state. While the reports succeeded in heightening public awareness over the mechanics of the voting process, they were also responsible for engendering a certain measure of public confusion and even alarm over the way election ballots are counted. At least a portion of the confusion and alarm is attributable to the fact that the various terms used to discuss the phenomena of "lost votes" (i.e., "overvotes," "undervotes," "spoiled ballots," "uncounted ballots," "voter falloff" and "residual votes") are not universally understood. To complicate matters, the media frequently employed the terms in imprecise or misleading ways without clear explanation. To avoid such confusion here, the following clarifications are offered:

"Overvote": An "overvote" occurs in an instance where the number of votes cast by a voter for an office on the ballot *exceeds* the number of candidates to be nominated or elected to the office. In such instances, no votes cast for the office are counted. ***Example:*** Ballot instructs voter to cast no more than one vote for the office of U.S. President; voter casts two votes for the office either on purpose, through confusion or by mistake.

"Undervote": An "undervote" occurs in an instance where the number of votes cast by a voter for an office on the ballot is *less* than the number of candidates to be nominated or elected to the office. ***Example:*** Ballot instructs voter to cast no

more than one vote for the office of U.S. President; voter casts no votes for the office either on purpose, through confusion or by mistake.

"Spoiled ballots": A voter who makes any type of error in voting his or her ballot which results in the loss of votes is said to have voted a "spoiled ballot." ***Example:*** Voter casts an "overvote" on purpose, through confusion or by mistake. Due to Michigan's "open primary" system, another common way that a voter can "spoil" a partisan primary ballot is to cast votes in more than a single party column appearing on the ballot. (In such cases, no votes cast in the partisan section of the ballot are counted.)

"Uncounted ballot": Confusion enters here as the term "uncounted ballot" is both used in a literal sense, i.e., a ballot that was not counted, and as shorthand for election ballots which contain "overvotes" and "undervotes." ***Example:*** In an instance where 653 voters cast ballots in a precinct and only 642 of those ballots contained a valid vote for the office of U.S. President, a news report may indicate that there were 11 "uncounted ballots" in the precinct despite the fact that all valid votes cast for the other offices on the ballot were, in fact, counted.

"Voter falloff": Frequently expressed as a percentage, "voter falloff" represents the difference between the number of ballots cast and the number of valid votes counted on the ballots for any given race. In a general election, the vote losses involved are attributable to "overvotes" and "undervotes." In a partisan primary election, the vote losses can also be attributable to "spoiled ballots" containing votes in more than a single party column. ***Example:*** In an instance where 653 voters cast ballots in a precinct and only 642 of those ballots contained a valid vote for the office of U.S. President, the "voter falloff" for the office would be expressed as 1.7 percent (the number of ballots which did not contain a valid vote for the office divided by the total number of ballots cast).

"Residual votes": Another way of referencing the number of "overvotes" and "undervotes" in any given race. ***Example:*** In an instance where 653 voters cast ballots in a precinct and only 642 of those ballots contained a valid vote for the office of U.S. President, a news report may indicate that there were 11 "residual votes" in the race.

While the current public furor over vote losses is relatively new, election officials have viewed "overvotes," "undervotes" and "spoiled ballots" as matters for significant concern since the invention of the paper ballot. As a result of this concern, the search for ways to minimize "vote losses" has been ongoing over the years. *The development of "precinct based" tabulation technology represents the most significant breakthrough to emerge from this search.*

As detailed under "Balloting Methods," the previous section of this report, all electronic voting systems can be grouped under two broad categories: systems which employ "precinct based" tabulation technology and systems that employ "central count" tabulation technology.

If the jurisdiction employs "precinct based" tabulation technology, a tabulator is placed in the polling place. The tabulator can be programmed to return ballots which contain an "overvote" and "spoiled" partisan primary ballots – a safeguard which protects voters against inadvertent vote losses. In instances where the tabulator rejects a voter's ballot due to a voting error, the voter is extended the opportunity to vote a replacement ballot.

If the jurisdiction employs "central count" tabulation technology, the ballots are counted at an offsite location and consequently, there is no mechanism in the polls to identify ballots which contain an "overvote" or "spoiled" partisan primary ballots. In such jurisdictions, all ballots are tabulated as voted; any invalid votes appearing on the ballots are *not* counted.

As Michigan has moved away from punch card systems that employ "central count" tabulation technology and moved toward optical scan systems that employ "precinct based" tabulation technology, significant reductions in the number of "lost votes" in the state have been realized. As an example, statistics show that the voter falloff in the 2000 presidential election was reduced by *50 percent* over the voter falloff in the 1988 presidential election – the last presidential election conducted prior to the introduction of optical scan voting systems in the state (see below).

Voter Falloff – Presidential Elections -- Statewide Data --			
	Total Vote	***Vote for President***	***Voter Falloff***
1984	3,884,854	3,801,658	2.1%
1988	3,745,751	3,669,163	2.0%
1992	4,341,909	4,274,673	1.5%
1996	3,912,261	3,848,844	1.6%
2000	4,279,299	4,232,501	1.0%

A similar reduction in "lost votes" can be observed in jurisdictions that moved from a punch card voting system employing "central count" tabulation technology to an optical scan voting system employing "precinct based" tabulation technology between the last two presidential elections (see below).

Voter Falloff – Presidential Elections -- Selected Jurisdictions --		
Jurisdiction	***1996 Punch Card Voting System***	***2000 Optical Scan Voting System***
City of Detroit (Wayne County)	3.1%	1.1%
City of Allen Park (Wayne County)	2.0%	0.8%
City of Sterling Heights (Macomb County)	2.0%	0.4%
City of Lapeer (Lapeer County)	1.6%	0.8%

The voter falloff reductions witnessed in Michigan as the state has migrated away from punch card voting systems which employ "central count" tabulation technology toward optical scan voting systems which employ "precinct based" tabulation technology are consistent with the findings in a report issued in March 2001 by the Caltech/MIT Voting Technology Project, *Residual Votes Attributable to Technology: An Assessment of the Reliability of Existing Voting Equipment:*

> *"The central finding of this investigation is that manually counted paper ballots have the lowest average incidence of spoiled, uncounted, and unmarked ballots, followed closely by lever machines and optically scanned ballots. Punchcard methods and systems using direct recording electronic devices (DREs) had significantly higher average rates of spoiled, uncounted, and unmarked ballots than any of the other systems. The difference in reliabilities between the best and worst systems is approximately 1.5 percent of all ballots cast."*

<u>CONCLUSION</u>: As "precinct based" tabulation technology can be employed to protect voters against ballot spoilage, the voting equipment selected for Michigan's uniform voting system must extend this important safeguard. The statewide implementation of the vote loss protection afforded by "precinct based" tabulation technology is particularly critical in view of the "equal protection" issues which have emerged in the aftermath of the 2000 presidential election.

Special Accommodation Requirements

Sound public policy dictates that every effort must be made to ensure that voters who are elderly and voters who are disabled are extended a full opportunity to exercise their right to vote without impairment. The obligations election officials are required to observe in accommodating the special needs of voters who are elderly or disabled were enacted in 1984 under the federal "Voting Accessibility for the Elderly and Handicapped Act." Under the federal law, election officials must make any arrangements needed to meet the special needs of elderly and disabled citizens who wish to vote *in person.* In effect, this means that 1.) all polling places must be fully accessible and 2.) the voting equipment placed in the polls must be designed to meet the special needs of voters who are elderly or disabled.

<u>CONCLUSION</u>: The voting system selected for Michigan's uniform voting system must conform to all accessibility standards and requirements established under federal law.

Mail Elections, Early Voting and Unrestricted Absentee Voting

Under current Michigan law, a voter must cast his or her ballot *in person* at the polls unless he or she qualifies for and obtains an absent voter ballot in advance of the election. A registered voter is eligible to obtain an absent voter ballot for an upcoming election if he or she 1.) is 60 years of age or more 2.) is unable to vote without assistance 3.) expects to be absent from his or her city or township of residence for the entire time the polls are open 4.) is in jail awaiting arraignment or trial 5.) has been appointed to work as an election inspector in a precinct outside of his or her precinct of residence or 6.) is unable to attend the polls due to his or her religious beliefs. A voter who wishes to receive an absent voter ballot must request it *in writing* from his or her city or township clerk. Voters who wish to receive their absent voter ballot by mail must submit their

written request for the ballot no later than 2:00 p.m. on the Saturday preceding the election.

While Michigan's absentee voting process has served the needs of Michigan voters who cannot attend the polls to vote for decades, the establishment of new programs which would extend *all* voters alternative ways to vote has been under almost continual discussion for a number of years. Several factors have spurred this discussion: 1.) the need to find ways to reverse the continuing decline in voter participation rates 2.) busier lifestyles have created a new class of voters who find it increasingly difficult to find the time to attend the polls on election day (yet do not qualify for an absentee ballot) and 3.) the ongoing search for ways to relieve congestion in the polls and reduce the workload imposed on election inspectors. Three programs are generally discussed:

Mail elections: Used extensively in several states, mail election programs have been shown to boost voter turnout as every registered voter automatically receives an election ballot by mail with instructions for voting and returning the ballot. In a June 1997 report issued by the Secretary of State's Special Advisory Committee on Elections, the establishment of a pilot mail election program was recommended to measure the program's performance.

Early voting: Early voting programs, currently established in Tennessee and Texas, permit voters to cast ballots in advance of an upcoming election at convenient locations where voters are most likely to congregate.

Unrestricted absentee voting: Unrestricted absentee voting would extend the opportunity to obtain and vote an absent voter ballot to *all* voters. The program would involve the repeal of the absentee ballot qualification restrictions which are currently in place.

While the debate over the relative merits of the three programs is expected to continue, the potential that one, two or all three of the programs could be enacted in some form in the future is worth considering here for a fundamental reason: whatever voting technology is selected to implement a statewide, uniform voting system in Michigan must be flexible enough to accommodate both "onsite voting" in the polling place and the various "offsite voting" options which would be extended through the programs.

<u>CONCLUSION</u>: The voting technology selected for Michigan's uniform voting system must be flexible enough to accommodate both "onsite voting" in the polling place and any expanded absentee voting programs adopted in the future. In effect, this eliminates direct recording electronic (DRE) voting systems as a viable choice for Michigan's uniform voting system with one proviso: DRE systems are ideally suited for "early voting" programs as

such systems can be programmed with hundreds of different ballot forms – a feature which can be used to match any given voter to his or her precinct's ballot regardless of where the voting equipment is stationed.

Vote Accumulation Needs

At the present time, the procedures employed to accumulate the vote totals for statewide and district elections is extremely tedious, time consuming and labor intensive. The steps followed to compile the results for a typical statewide November general election are illustrative:

- Immediately after a precinct board completes its documentation of the votes cast in the precinct, one of the Statement of Votes, one of the tally sheets (if a hand-tally was completed in the precinct) and the voting machine print-outs (if any) are sealed in an envelope addressed to the Board of County Canvassers. The envelope is delivered by the election inspectors to the city or township clerk. (If the jurisdiction involved employs "central count" tabulation technology, the certifying board at the counting center is responsible for preparing and delivering the envelope.) The city or township clerk delivers the envelopes received from the jurisdiction's precincts to the Probate Judge in the county for safekeeping.

- In addition to the above, the election inspectors seal the second Statement of Votes, the second tally sheet (if a hand-tally was completed in the precinct) and the Poll Book in an envelope addressed to the county clerk. (If the jurisdiction involved employs "central count" tabulation technology, the certifying board at the counting center is responsible for preparing the county clerk's envelope.) The envelope is delivered to the county clerk as arranged by the city or township clerk. The county clerk uses the election records received from the city or township clerks to compile unofficial returns for the county.

- To speed the compilation of unofficial returns at the state level, the Department of State's Bureau of Elections supplies each county clerk with a form for submitting the county's unofficial vote results for the federal, state and judicial offices on the ballot as well as any statewide proposals presented on the ballot. Instructions for faxing the county's unofficial totals to the Bureau on election night are included with the form. At 6:00 a.m. on the morning after the election, the Elections Bureau staff begins calling the county clerks who have not yet faxed their unofficial vote totals for a status report on the compilation of the county's unofficial returns. Generally, unofficial returns for all 83 counties in the state are received by 12:00 p.m. the day after the election. As the returns are keyed, they are posted on the Bureau's website. The

compilation of unofficial returns for a November general election typically requires 48 hours of key entry time and over 230,000 key strokes.

- Prior to the commencement of the election canvass on the county level, the Probate Judge delivers the envelopes addressed to the Board of County Canvassers to the county clerk. When the Board of County Canvassers is assembled to begin the canvass, the county clerk presents the envelopes received from the Probate Judge (sealed) and the envelopes containing the records used to compile the unofficial returns for the election (seal broken) to the Board. The Board of County Canvassers is required to certify the votes cast in the county no later than the 14th day after the election.

- After the completion of the canvass, the Board of County Canvassers in each county is responsible for forwarding the county's certified election results for the federal, state and judicial offices on the ballot as well as any statewide proposals presented on the ballot to the Secretary of State. The documents supplied to the Secretary of State by the Boards of County Canvassers are used by the Bureau of Elections to compile a final statement of the votes cast at the election for those races certified by the Board of State Canvassers. The Board of State Canvassers is required to convene to begin its canvass of the races and ballot proposals it certifies no later than the 20th day after the election. The canvass and certification of the races and ballot proposals involved must be completed no later than the 40th day after the election.

- After the certification of the election, the precinct results provided by each county are used by the Bureau of Elections to compile statewide results by precinct for the federal, state and judicial offices filled at the election. Precinct results are also produced for statewide ballot proposals.

While the above procedure for compiling the unofficial and official vote totals for statewide elections has been followed for decades, new advancements in vote accumulation software have essentially rendered the procedure obsolete. With a statewide, uniform vote accumulation system in place, all vote totals would be electronically transmitted to the Bureau through a process that would eliminate the mailing, faxing, key entry and proofing now involved with the process. The implementation of a statewide, uniform voting system would open an opportunity to put a statewide, automated vote accumulation system in place.

<u>CONCLUSION</u>: The voting technology selected for Michigan's uniform voting system must be capable of supporting a statewide, automated vote accumulation system.

Punch Card Voting

Regardless of what can be said in defense of punch card voting, public confidence in the accuracy and integrity of punch card voting systems was irreparably harmed by the events which unfolded in Florida following the 2000 presidential election. After the endless reports of "hanging chads," "dimpled chads," "pregnant chads," improperly maintained voting equipment, programming errors and faulty ballot layouts, there is little reason to question the sudden drop in confidence in punch card voting technology. While it can be debated whether punch card voting truly deserves the reputation damage it sustained in the aftermath of the 2000 presidential election, what *cannot* be disputed is that the use of punch card ballots for absentee voting purposes became outmoded with the introduction of optical scan voting technology. There are two essential reasons:

1.) Absentee voters who have been issued a punch card ballot are required to cross reference the numbered "chads" on the punch card to a booklet which lists the candidates' names and the "punch positions" assigned to the candidates; absentee voters who have been issued an optical scan ballot are not required to perform any such cross referencing in order to vote as the candidates' names appear on the ballot itself.

2.) The "chads" which must be removed from a punch card ballot in order to cast a vote are extremely small (approximately 1/8 inch wide x 1/16 inch high). To remove the chads, absentee voters are issued a "punching tool" which is generally no larger than paper clip. As can be easily imagined, absentee voters who are elderly or infirm or who suffer from dexterity impairments often find it difficult to locate and remove the appropriate chads to indicate their votes. On the other hand, absentee voters who have been issued an optical scan ballot experience no such problems as the "target areas" which appear on optical scan ballots are relatively easy to mark with a pen or pencil.

<u>CONCLUSION</u>: The voting technology selected for Michigan's uniform voting system must not rely on punch card balloting for absentee voters. In effect, this eliminates punch card voting as a viable choice for Michigan's uniform voting system.

V. Recommendations

Principle Recommendation

Given the voting system options which are presently available in conjunction with the various considerations outlined earlier in this report, the adoption of a statewide, uniform optical scan voting system which employs "precinct based" tabulation technology is recommended. The adoption and implementation of such a voting system would benefit Michigan in a number of significant ways:

- All voters would enjoy "equal protection" against ballot spoilage. As a result, "voter falloff" would be reduced throughout the state.

- The accommodation of voters who are elderly or disabled would be fully ensured.

- A cost savings could be realized on the large scale purchase of voting equipment, service contracts and ballots.

- The education of voters – and future voters – on the procedures for casting a ballot would be facilitated as only one voting process would be involved. (At the present time such programs are difficult to coordinate because of the multiplicity of voting systems in use.)

- The training of precinct inspectors (a county responsibility) would be greatly facilitated. As an added benefit, the skills and experience of seasoned precinct inspectors who move to a different jurisdiction within the state would not be lost.

- Election results could be compiled and released with greater speed and efficiency. Greater efficiency and accuracy would also gained at the certification step as it would no longer be necessary for the Boards of County Canvassers to review a variety of different Statement of Vote forms and Polls Book formats.

- The availability of uniformly compiled and presented precinct level vote data immediately after the election would aid candidates and political parties in identifying the precincts where vote recounts may be warranted.

- Michigan's city and township clerks would have an expanded opportunity to support one another through their association activities.

There are at least seven significant reasons why an optical scan voting system which employs "precinct based" tabulation technology is the best choice for Michigan's uniform voting system:

- As Michigan is not in a position to wait for Internet voting to become a viable option before addressing the state's pressing voting equipment needs, the voting system selected for Michigan's uniform voting system should be viewed as an "interim step" while awaiting the availability of viable Internet voting options. Given this consideration, optical scan voting technology is best suited for Michigan's statewide, uniform voting system as 3,006 of the state's 5,376 precincts (55.9%) already employ optical scan voting systems.

- As Michigan is already in the process of moving toward optical scan voting systems, it will cost far less to adopt a statewide, uniform optical scan voting system than a statewide, uniform direct recording electronic (DRE) voting system.

- As "precinct based" tabulation technology is now available to protect voters against ballot spoilage, the voting equipment selected for Michigan's uniform voting system must extend this important safeguard. The statewide implementation of the vote loss protection afforded by "precinct based" tabulation technology is particularly critical in view of the "equal protection" issues which have emerged in the aftermath of the 2000 presidential election.

- The voting system selected for Michigan's uniform voting system must conform to all accessibility standards and requirements established under federal law. Optical scan voting systems are capable of meeting this need.

- The voting technology selected for Michigan's uniform voting system must be flexible enough to accommodate both "onsite voting" in the polling place and any expanded absentee voting programs adopted in the future. In effect, this eliminates direct recording electronic (DRE) voting systems as a viable choice for Michigan's uniform voting system.

- The voting technology selected for Michigan's uniform voting system must be capable of supporting a statewide, automated vote accumulation system. Optical scan voting technology is capable of supporting such a system.

- The voting technology selected for Michigan's uniform voting system must not rely on punch card balloting for absentee voters. In effect, this eliminates punch card voting as a viable choice for Michigan's uniform voting system.

Strengthening Michigan's Elections System

Three additional recommendations designed to strengthen Michigan's elections system are also offered:

- **The development and implementation of an "early voting" program which would permit Michigan citizens to vote at convenient locations up to two weeks prior to an upcoming election.**

  The program would be supported with state purchased direct recording electronic (DRE) voting equipment. DRE systems are ideally suited for "early voting" programs as such systems can be programmed with hundreds of different ballot forms – a feature which can be used to match any given voter to his or her precinct's ballot regardless of where the voting equipment is stationed. As an initial step, an "early voting" option could be offered through the clerks' offices. Later implementation steps could include the expansion of the program to afford voters the opportunity to vote at "remote sites" prior to the election.

- **The expansion and improvement of the training programs currently conducted for election inspectors appointed to serve in the polls.**

  The initiative could be supported with 1.) state grants to county and local election officials responsible for conducting election inspector training programs and 2.) state sponsored "train the trainer" programs designed to improve the quality of the instruction offered election inspectors.

- **The development and implementation of a program which would require voters who claim to be registered but cannot be found on the registration rolls to vote a "provisional ballot."**

  Under the proposed program, any "provisional ballots" voted on election day would not be counted unless it was later confirmed that the voter did, in fact, register to vote before the registration deadline for the election at hand.

Statewide Voting System Cost Analysis

The cost of a statewide, uniform optical scan voting system which employs "precinct based" tabulation technology is estimated to be $26.1 million to $38.7 million.[(1)]

In contrast, the cost of a statewide, uniform direct recording electronic (DRE) voting system is estimated to be $82.4 million to $93 million.[(2)]

As 3,006 of Michigan's 5,376 precincts (55.9%) already employ optical scan voting technology, the cost of implementing a statewide, uniform optical scan voting system could be spread over a number of years. The first year would involve the purchase of optical scan voting equipment for those jurisdictions that do not currently employ optical scan voting technology to conduct elections (estimated cost: $14 million). In subsequent years, updated optical scan voting equipment would be purchased to replace the optical scan voting equipment now in use as the equipment currently being used to conduct elections becomes outdated. (The optical scan voting equipment replacements would take place in 2003 and 2005.) Such an approach would require an initial appropriation of $14 million with the remaining costs ($12.1 million to $24.7 million) spread over the following three fiscal years.

The above cost estimates do *not* reflect the cost of establishing a statewide, automated vote accumulation system. The implementation of such a system in conjunction with a statewide, uniform optical scan voting system would cost an additional $6.3 million to $7 million.

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(1) Estimate reflects the initial cost of purchasing the equipment (one tabulator per precinct), hardware and software; estimate does *not* include the maintenance, repair or implementation of the system or the cost of producing ballots.

(2) Estimate reflects the initial cost of purchasing the equipment (one voting station for every 200 registered voters), hardware and software; estimate does *not* include the maintenance, repair or implementation of the system, the cost of producing ballots for absentee voters or the cost of a companion absent voter ballot tabulation system.

VI. Appendix: Public Officials, Commissions, and Boards Involved in the Administration of Michigan Elections

The highly decentralized nature of Michigan's election system can be traced to the small town traditions of 17th century New England. The first organized local governments on the American continent, New England towns of the 17th century gave rise to town meetings and the election of citizens to locally controlled offices and boards. From New England, the concept of local self-governance spread south and west to a number of mid-Atlantic states and most of the Midwest including Michigan. (The establishment of townships in Michigan, Ohio, Indiana, Illinois and Wisconsin is rooted in the county and township governments put in place in the region after the enactment of the Northwest Ordinance of 1787.) Today, Michigan is one of 20 states in the nation that maintains a township level of government. The following outlines the public officials, commissions and boards involved in the administration of elections in Michigan:

Secretary of State: Michigan election law designates the Secretary of State as Michigan's "chief election officer" with supervisory control over local election officials in the performance of their duties.

Board of State Canvassers: The Board of State Canvassers is currently composed of two Republican members and two Democratic members. The Board members are responsible for canvassing petitions filed by candidates seeking federal and state offices, minor parties, and groups that wish to place proposals on the statewide ballot. The Board members also arrange the ballot wording of the proposals, approve voting equipment for use in the state and certify the result of elections held statewide and in districts which cross county lines.

Bureau of Elections: The Department of State's Bureau of Elections, located in Lansing, works under the direction of the Secretary of State and the Board of State Canvassers. The State Elections Director serves as the Director of the Elections Bureau. The Elections Bureau accepts and reviews petition filings, conducts statewide instructional programs on elections, assists local election officials with their administrative duties, oversees the operation of Michigan's Qualified Voter File system, publishes manuals and newsletters, and monitors legislation affecting

the administration of elections. In addition, the Elections Bureau administers Michigan's Campaign Finance Act and Lobby Registration Act.

County Clerks: The 83 county clerks in the state receive and canvass petitions for countywide and district offices which do not cross county lines and accept campaign finance disclosure reports from local candidates. In addition, the county clerks are responsible for training precinct inspectors and assisting with the administration of Michigan's Qualified Voter File system.

County Election Commissions: Each of the 83 County Election Commissions in the state is composed of the county clerk, the chief judge of probate of the county or probate court district, and the county treasurer. The Commission members are responsible for furnishing specified election supplies (including ballots) for statewide August primaries, statewide November general elections and special primaries and elections held to fill vacancies in federal, state and county offices. In addition, the Commission members are responsible for holding hearings to determine the clarity of the wording used on recall petitions.

Boards of County Canvassers: Each of the 83 Boards of County Canvassers is currently composed of two Republican members and two Democratic members. The Board members are responsible for canvassing the votes cast within the county they serve. The Board members certify elections for local, countywide and district offices which are wholly contained within the county they serve. The Board members are also responsible for inspecting the county's ballot containers every four years.

City and Township Clerks: City and township clerks maintain the registration records for their respective jurisdictions and are responsible for administering all federal, state, county, city and township elections. Three hundred and sixty-three city and township clerks have direct on-line access to Michigan's Qualified Voter File system. The remaining clerks share the QVF resources available on the county level.

City and Township Election Commissions: A City Election Commission is composed of the city clerk, the city attorney and the city assessor unless otherwise provided by charter. A Township Election Commission is composed of the township clerk, the township supervisor and the township treasurer. City and Township Election Commission members are responsible for establishing precincts, assessing voting equipment needs, providing election supplies (including ballots), appointing precinct inspectors and carrying out other election related duties for their respective jurisdictions.

City and Township Boards of Canvassers: City and Township Boards of Canvassers, where established, are currently composed of two Republican

members and two Democratic members. The Board members are responsible for canvassing elections conducted by the local jurisdiction.

Village Clerks: Village clerks maintain the registration records for their respective jurisdictions and are responsible for administering elections held to fill village offices and present village ballot proposals.

Village Election Commissions: A Village Election Commission is composed of the village clerk, the village president and the village treasurer unless otherwise provided by charter. Village Election Commission members are responsible for establishing precincts, assessing voting equipment needs, providing election supplies (including ballots), appointing precinct inspectors and carrying out other election related duties for their respective jurisdictions.

School Board Secretaries: School Board Secretaries maintain the registration records for their respective school districts and are responsible for administering all school elections. The registration records maintained on the school level are copies of the registration records maintained by the clerks of the cities and townships located in the school district.

VII. Appendix: Voting System Approval Procedures

Legal requirements for use: Michigan election law stipulates that an electronic voting system cannot be employed in the State of Michigan to conduct elections unless:

1.) it has been approved for use in the state by the Michigan Board of State Canvassers;

2.) it has been certified by an independent testing authority accredited by the National Association of State Election Directors; and

3.) the vendor has placed a copy of the associated "source code" in an escrow account.

Application procedure: An electronic voting system approval request must include all of the following:

- A letter requesting the approval of the electronic voting system addressed to the Michigan Board of State Canvassers.
- A nonrefundable application fee of $1,500.00.
- Copies of pertinent reports, contracts, maintenance agreements, operational manuals, etc.

System evaluation: After the submission of the application, the vendor is contacted to arrange for the delivery of the voting system to the Michigan Department of State's Bureau of Elections for testing and evaluation. The testing and evaluation of the system includes a "field test" of the equipment involving Michigan electors and election officials. The field test is used to measure voter reaction to the system, identify any problems that voters have with the system and gauge the number of voting stations required for the efficient operation of precincts employing the system. The vendor is responsible for paying any costs associated with the field test.

Marketing, purchase and use of voting system: After a voting system has been approved in Michigan, the vendor is free to market the system to election officials throughout the state who are in need of replacing their existing system. The decision to purchase a voting system is made at the city/township level (although agreements for the purchase of the equipment on the county level are possible). Michigan election law prohibits a jurisdiction from using a newly purchased voting system to administer a November general election unless the jurisdiction purchased the system at least 6 months before the election and has conducted at least one other election with the system.

Questions regarding the preparation, contents or findings of this report should be addressed to the following office:

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